

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Russell et al.

Serial No.:

Group No.:

Filed:

Examiner:

For: ADJUSTABLE DOWNHOLE TOOL

Mail Stop Patent Application

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1. Preliminary Statements
2. Forms PTO 1449 (now PTO/SB/08A and 08B)
3. Copies of Listed Information Items Accompanying This Statement
4. Concise Explanation of English Language Listed Information Items
5. Identification of Person(s) Making This Information Disclosure Statement

Section 1. Preliminary Statements


Applicant(s) submits herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this Information Disclosure Statement and the documents referred to as attached thereto are being deposited with the United States Postal Service on the date listed below, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number ER 775 417 620 US, addressed to: Mail Stop Patent Application, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

Date

2/10/04


Kenneth A. Keeling
Registration No. 31,842

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 CFR 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

Section 2. PTO 1449 (Now Forms PTO/SB/08A and 08B)

PTO Form 1449 is attached hereto.

Section 3. Copies of Listed Information Items Accompanying This Statement

Legible copies of all items listed in Form PTO-1449 accompany this information statement.

Section 4. Concise Explanation of English Language Listed Information Items

1. European Pat. No. EP-A-0251543, issued to Anderson, published on January 7, 1988

Describes a stabiliser that is activated by weight on the stabiliser from the drill string above it. Weight, or absence thereof, switches the stabiliser between activated and de-activated positions. The weight acts on a mandrel slidable in the bore of the stabiliser, which mandrel has ramps against which wedge-surfaces on the bases of the pistons slide. A mechanical detent is overcome by a compressive force on the stabiliser greater than a threshold value, so that unless substantial changes in weight act on the stabiliser, switching does not occur.

2. European Pat. No. EP-A-0190529, issued to SMF INT, published on August 13, 1986 (corresponding U.S. Pat. No. 4,821,817, issued to Cendre et al. on April 18, 1989)

Discloses a differential piston that cooperates with a flow restrictor so that, if the fluid pressure rises beyond a low threshold, the piston (or flow restrictor) moves too rapidly and substantially increase the pressure differential across the piston which then drives the mandrel to activate the stabiliser. As a subsidiary feature the mandrel rotates on each stroke because the pads have pins which follow a barrel cam defined around the mandrel, which barrel cam has different steepness ramps so that the pads are extended different amounts.

3. Great Britain Pat. No. GB-A-2263923, issued to Lee, published on August 11, 1993

Discloses a stabiliser control arrangement in which the object is to not be dependent on either fluid pressure or weight on the bit to maintain a stabiliser setting. This is achieved by lifting the drill string to positively disengage the locking mechanism, and then fluid pressure is employed to

determine the stabiliser piston position. At the appropriate pressure the drill string is lowered to engage a lock, whereupon subsequent changes in fluid pressure have no effect on stabiliser position.

4. Great Britain Pat. No. GB-A-2251444, issued to Lee, published on July 8, 1992

Discloses check valves that prevent operation or deactivation of the stabiliser pads unless the pressure of the pump fluid exceeds or falls below upper and lower threshold values.

5. European Pat. No. EP-A-0661412, issued to Inst Francais Du Petrol, published on July 5, 1995 (corresponding U.S. Pat. No. 5,483,987, issued to Amaudric du Chaffaut et al. on January 16, 1996)

Discloses a stabiliser in which the position of a control piston determines the pressure drop across the mandrel which therefore controls the position of the mandrel. The control piston has a barrel cam in which a pin of the housing slides, so that the piston is constrained to follow a course determined by the track. A junction in the track is provided so that, at an intermediate pressure, if the pressure is reversed the pin does not return to its starting pint but goes up a branch to a lesser (or greater) extent than its starting point. The stabiliser is activated between upper and lower pressures and that the pressure be taken from one level to an intermediate level whereupon the direction of pressure change is reversed.

6. Great Britain Pat. No. GB-A-2314868, issued to Lee, published on January 14, 1998, the publication of which is supplanted by International Application PCT/GB96/01044, published on November 7, 1996

Describes an arrangement in which the mandrel is hydraulically operated between operative and inoperative positions. A first shoulder on the body of the stabiliser in which the mandrel slides has a serrated face. A facing shoulder on the body has a clutch face which is also serrated. Between the two faces is a sleeve which is axially fixed but rotationally freely slidable on the mandrel. On the edge of the sleeve facing the serrated edge of the body is series of knobs to engage the serrations and rotate the sleeve through a small angle when the sleeve is axially pressed against the serrations. On its other edge, it has a series of fingers to engage the clutch face and either catch on ridges of the clutch face, which are provided with stops to prevent further rotation of the sleeve, or they miss the stops and hit a sloping serration of the lower shoulder causing further rotation of the sleeve until its fingers coincide with long slots in the shoulder whereupon the sleeve permits the mandrel to go to its operative position.

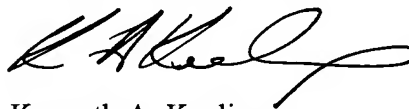
Consequently, as pressure is alternated and the mandrel moves back and forth, when it first moves down, for example, it may rest on the ridges of the clutch face and prevent the mandrel from going to its operative position. When the pressure is released and the mandrel rises the knobs on the sleeve hit the serrations and turn the sleeve through a small angle; enough so that on the next stroke of the mandrel the fingers on the sleeve do not stay on the ridges. Instead, the fingers slide down the serrations of the clutch face and drop into slots therein. This movement takes the mandrel into its operative position. Finally on the return stroke, when the knobs again contact the serrated face the sleeve again rotates, repeating the cycle.

Section 5. Identification of Person(s) Making This Information Disclosure Statement

The person making this statement is:

- (a) ☐ the inventor(s) who signs below.
- (b) ☐ an individual associated with the filing and prosecution of this application.
- (c) ☒ the practitioner who signs below on the basis of the information:
 - ☐ supplied by the inventor(s).
 - ☐ supplied by an individual associated with the filing and prosecution of this application (37 CFR 1.56(c))
 - ☒ in the practitioner's file.

Respectfully submitted,



Kenneth A. Keeling
Registration No. 31,842
James E. Hudson III
Registration No. 41,081

February 10, 2004
Keeling Hudson L.L.C.
901 North Post Oak Road
Houston, Texas 77024
713-680-1447
713-680-8567 (Fax)

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Substitute for form 1449/PTO <h1>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h1> <p><i>(Use as many sheets as necessary)</i></p>		Complete if Known	
		Application Number	
		Filing Date	
		First Named Inventor	Russell
		Art Unit	
		Examiner Name	
Sheet 1	of 1	Attorney Docket Number	

[illegible]

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ *Number ⁴ *Kind Code ⁵ (if known)				
		EP-A-0251543	01-07-1988	Anderson		
		GB-A-2263923	08-11-1993	Lee		
		GB-A-2251444	07-08-1992	Lee		
		GB-A-2314868	01-14-1998	Lee		
		EP-A-0191529	08-13-1986	SMF Int'l		
		EP-A- 0661412	07-05-1995	Inst Francais		

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.